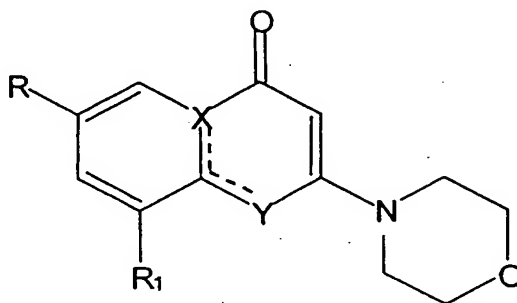


Claims

1. A method of disrupting platelet aggregation and adhesion occurring under high shear conditions comprising administering an effective amount of a selective PI 3-kinase β inhibitor to a patient in need thereof.
2. (Amended) A method for antithrombosis comprising administering an effective amount of a selective PI 3-kinase β inhibitor to a patient in need thereof,



provided that the inhibitor is not according to formula (II):

(II)

wherein,

where X and Y are C and O respectively, or C and NH respectively, or both N

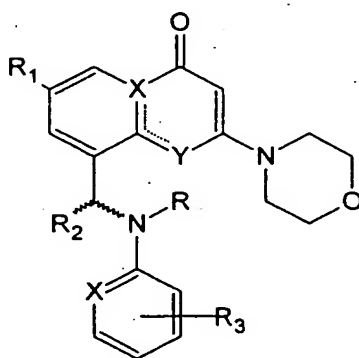
R is H, OH, F, Cl, Br, I, C₁-C₆ alkyl, aryl or (CH₂)_n-aryl;

R¹ is H, OH, F, Cl, Br, I, C₁-C₆ alkyl, C₃-C₆ cycloalkyl, CH=CH-aryl, C≡C-aryl, (CHR³)_n-aryl, NR³-C₁-C₆ alkyl, NR³-cycloalkyl, NR³-(CHR³)_n-aryl, (CHR³)_n-NR³-alkyl, (CHR³)_n-NR³-cycloalkyl, (CHR³)_n-O-aryl, (CHR³)_n-O-alkyl, (CHR³)_n-O-cycloalkyl, O-(CHR³)_n-aryl, S-(CHR³)_n-aryl, or CO-aryl, wherein n is 0, 1, or 2 and alkyl, cycloalkyl or aryl is optionally substituted with F, Cl, Br, I, CN, CO₂H, CO₂R³, NO₂, CF₃, substituted or unsubstituted C₁-C₆ alkyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, OCF₃, OR³, OSO₂-aryl, substituted or unsubstituted amine, NHCOR³, NHSO₂R³, CONHR³, or SO₂NHR³; and

R^3 is H, or substituted or unsubstituted C_1 - C_6 alkyl, substituted or unsubstituted aryl;
except where the compound of formula (II) is selected from the group consisting of:

9-(3-pyridinylmethyl)oxy-2-morpholinyl-4H-pyrido[1,2-a]pyrimidin-4-one (TGX-140);
7-methyl-9-phenylaminomethyl-2-morpholinyl-4H-pyrido[1,2-a]pyrimidin-4-one (TGX-183);
8-(4-methylphenyl)-2-(4-morpholinyl)-4(1H)-quinolinone (TGX-113);
8-(4-fluorophenoxy)-2-(4-morpholinyl)-4(1H)-quinolinone (TGX-121);
2-morpholinyl-8-(phenylmethyl)-4H-1-benzopyran-4-one (TGX-90);
2-(4-morpholinyl)-8-(4-fluoro-2-methylphenyl)oxy-4H-1-benzopyran-4-one (TGX-184);
7-methyl-9-(*N*-Methyl-*N*-phenyl)aminomethyl-2-(4-morpholinyl)-4H-pyrido[1,2-a]pyrimidin-4-one (TGX-195);
2-(4-morpholinyl)-8-(phenylmethyl)amino-4H-1-benzopyran-4-one (TGX-204);
2-(4-morpholinyl)-8-phenylamino-4H-1-benzopyran-4-one (TGX-324);
8-(3-chlorophenyl)oxy-2-(4-morpholinyl)-4H-1-benzopyran-4-one (TGX-259);
8-(3-methylphenyl)-2-(4-morpholinyl)-4(1H)-quinolinone (TGX-127);
8-(2-fluorophenyl)-2-(4-morpholinyl)-4(1H)-quinolinone (TGX-143);
(\pm)-7-methyl-2-morpholin-4-yl-9-[1-(3-pyridinylamino)ethyl]-pyrido[1,2-a]pyrimidin-4-one (KN-304).

3. The method of claim 2, wherein the selective PI 3-kinase β inhibitor is according to formula (I):



(I)

wherein,

R is H, C_1 - C_6 branched or straight chain alkyl, or aryl or $(CH_2)_n$ -aryl;

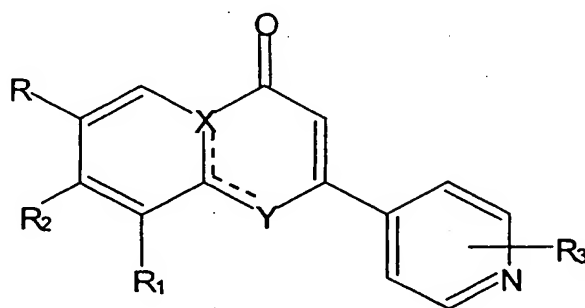
R_1 is H, OH, OCH_3 , OCF_3 , F, Cl, CF_3 , C_1 - C_6 branched or straight chain alkyl, or aryl or $(CH_2)_n$ -aryl;

R_2 is C_1 - C_6 branched or straight chain alkyl, or aryl or $(CH_2)_n$ -aryl in either the R or the S configuration

R_3 is one or more of H, F, Cl, Br, I, CN, CO_2H , CO_2R , NO_2 , CF_3 , substituted or unsubstituted C_1 - C_6 alkyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, OCH_3 , OCH_2F , $OCHF_2$, OCF_3 , OR, OSO_2 -aryl, substituted or unsubstituted amine, $NHCOR$, $NHSO_2R$, $CONHR$, or SO_2NHR

X is C or N and Y is N or O.

4. (Amended) The method of claim 2, wherein the selective PI 3-kinase β inhibitor is according to formula (III):



(III)

(A) where X and Y are C and O respectively

R is H, OH, OCH_3 , OCF_3 , F, Cl, Br, I, C_1 - C_6 alkyl, aryl or $(CH_2)_n$ -aryl;

R_1 is H, OH, F, Cl, Br, I, C_1 - C_6 alkyl, C_3 - C_6 cycloalkyl, $CH=CH$ -aryl, $C\equiv C$ -aryl, $(CHR'^3)_n$ -aryl, NR'^3 - C_1 - C_6 alkyl, NR'^3 -cycloalkyl, NR'^3 -(CHR'^3) $_n$ -aryl, $(CHR'^3)_n$ - NR'^3 -aryl, $(CHR'^3)_n$ - NR'^3 -alkyl, $(CHR'^3)_n$ - NR'^3 -cycloalkyl, $(CHR'^3)_n$ -O-aryl, $(CHR'^3)_n$ -O-cycloalkyl, O-

$(\text{CHR}^{\prime 3})_n\text{-aryl}$, $\text{S-(CHR}^{\prime 3})_n\text{-aryl}$, or CO-aryl , wherein n is 0, 1, or 2, $(\text{CHR}^{\prime 3})_m\text{-O-alkyl}$ wherein m is 1 or 2, and cycloalkyl or aryl is optionally substituted with F, Cl, Br, I, CN, CO_2H , $\text{CO}_2\text{R}^{\prime 3}$, NO_2 , CF_3 , substituted or unsubstituted $\text{C}_1\text{-C}_6$ alkyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, OCF_3 , $\text{OR}^{\prime 3}$, $\text{OSO}_2\text{-aryl}$, substituted or unsubstituted amine, $\text{NHCOR}^{\prime 3}$, $\text{NHSO}_2\text{R}^{\prime 3}$, $\text{CONHR}^{\prime 3}$, or $\text{SO}_2\text{NHR}^{\prime 3}$ and alkyl is optionally substituted with F, Cl, Br, I, CN, NO_2 , CF_3 , substituted or unsubstituted $\text{C}_1\text{-C}_6$ alkyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, OCF_3 , $\text{OSO}_2\text{-aryl}$, substituted or unsubstituted amine, $\text{NHCOR}^{\prime 3}$, $\text{NHSO}_2\text{R}^{\prime 3}$, $\text{CONHR}^{\prime 3}$, or $\text{SO}_2\text{NHR}^{\prime 3}$;

R_2 and R_3 are independently H, OH, F, Cl, Br, I, $\text{C}_1\text{-C}_6$ alkyl, $\text{C}_3\text{-C}_6$ cycloalkyl, CH=CH-aryl , $\text{C}\equiv\text{C-aryl}$, $(\text{CHR}^{\prime 3})_n\text{-aryl}$, $\text{NR}^{\prime 3}\text{-C}_1\text{-C}_6$ alkyl, $\text{NR}^{\prime 3}\text{-cycloalkyl}$, $\text{NR}^{\prime 3}\text{-(CHR}^{\prime 3})_n\text{-aryl}$, $(\text{CHR}^{\prime 3})_n\text{-NR}^{\prime 3}\text{-aryl}$, $(\text{CHR}^{\prime 3})_n\text{-NR}^{\prime 3}\text{-alkyl}$, $(\text{CHR}^{\prime 3})_n\text{-NR}^{\prime 3}\text{-cycloalkyl}$, $(\text{CHR}^{\prime 3})_n\text{-O-aryl}$, $(\text{CHR}^{\prime 3})_n\text{-O-alkyl}$, $(\text{CHR}^{\prime 3})_n\text{-O-cycloalkyl}$, $\text{O-(CHR}^{\prime 3})_n\text{-aryl}$, $\text{S-(CHR}^{\prime 3})_n\text{-aryl}$, or CO-aryl , wherein n is 0, 1, or 2 and alkyl, cycloalkyl or aryl is optionally substituted with F, Cl, Br, I, CN, CO_2H , $\text{CO}_2\text{R}^{\prime 3}$, NO_2 , CF_3 , substituted or unsubstituted $\text{C}_1\text{-C}_6$ alkyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, OCF_3 , $\text{OR}^{\prime 3}$, $\text{OSO}_2\text{-aryl}$, substituted or unsubstituted amine, $\text{NHCOR}^{\prime 3}$, $\text{NHSO}_2\text{R}^{\prime 3}$, $\text{CONHR}^{\prime 3}$, or $\text{SO}_2\text{NHR}^{\prime 3}$; and

$\text{R}^{\prime 3}$ is H, or substituted or unsubstituted $\text{C}_1\text{-C}_6$ alkyl, substituted or unsubstituted aryl or

(B) where X and Y are C and NH respectively

R is H, OH, OCH_3 , OCF_3 , F, Cl, Br, I, $\text{C}_1\text{-C}_6$ alkyl, aryl or $(\text{CH}_2)_n\text{-aryl}$;

R_1 , R_2 and R_3 are independently H, OH, F, Cl, Br, I, $\text{C}_1\text{-C}_6$ alkyl, $\text{C}_3\text{-C}_6$ cycloalkyl, CH=CH-aryl , $\text{C}\equiv\text{C-aryl}$, $(\text{CHR}^{\prime 3})_n\text{-aryl}$, $\text{NR}^{\prime 3}\text{-C}_1\text{-C}_6$ alkyl, $\text{NR}^{\prime 3}\text{-cycloalkyl}$, $\text{NR}^{\prime 3}\text{-(CHR}^{\prime 3})_n\text{-aryl}$, $(\text{CHR}^{\prime 3})_n\text{-NR}^{\prime 3}\text{-aryl}$, $(\text{CHR}^{\prime 3})_n\text{-NR}^{\prime 3}\text{-alkyl}$, $(\text{CHR}^{\prime 3})_n\text{-NR}^{\prime 3}\text{-cycloalkyl}$, $(\text{CHR}^{\prime 3})_n\text{-O-aryl}$, $(\text{CHR}^{\prime 3})_n\text{-O-alkyl}$, $(\text{CHR}^{\prime 3})_n\text{-O-cycloalkyl}$, $\text{O-(CHR}^{\prime 3})_n\text{-aryl}$, $\text{S-(CHR}^{\prime 3})_n\text{-aryl}$, or CO-aryl , wherein n is 0, 1, or 2 and alkyl, cycloalkyl or aryl is optionally substituted with F, Cl, Br, I, CN, CO_2H , $\text{CO}_2\text{R}^{\prime 3}$, NO_2 , CF_3 , substituted or unsubstituted $\text{C}_1\text{-C}_6$ alkyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, OCF_3 , $\text{OR}^{\prime 3}$, $\text{OSO}_2\text{-aryl}$, substituted or unsubstituted amine, $\text{NHCOR}^{\prime 3}$, $\text{NHSO}_2\text{R}^{\prime 3}$, $\text{CONHR}^{\prime 3}$, or $\text{SO}_2\text{NHR}^{\prime 3}$; and

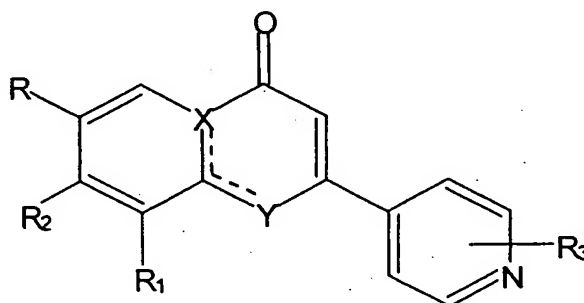
R'^3 is H, or substituted or unsubstituted C_1 - C_6 alkyl, substituted or unsubstituted aryl or
(C) where X and Y are both N

R is H, OH, OCH_3 , OCF_3 , F, Cl, Br, I, C_1 - C_6 alkyl, aryl or $(CH_2)_n$ -aryl;

R_1 , R_2 and R_3 are independently H, OH, F, Cl, Br, I, C_1 - C_6 alkyl, C_3 - C_6 cycloalkyl, $CH=CH$ -aryl, $C\equiv C$ -aryl, $(CHR'^3)_n$ -aryl, NR'^3 - C_1 - C_6 alkyl, NR'^3 -cycloalkyl, NR'^3 -(CHR'^3) $_n$ -aryl, $(CHR'^3)_n$ - NR'^3 -aryl, $(CHR'^3)_n$ - NR'^3 -alkyl, $(CHR'^3)_n$ - NR'^3 -cycloalkyl, $(CHR'^3)_n$ -O-aryl, $(CHR'^3)_n$ -O-alkyl, $(CHR'^3)_n$ -O-cycloalkyl, O-(CHR'^3) $_n$ -aryl, S-(CHR'^3) $_n$ -aryl, or CO-aryl, wherein n is 0, 1, or 2 and alkyl, cycloalkyl or aryl is optionally substituted with F, Cl, Br, I, CN, CO_2H , $CO_2R'^3$, NO_2 , CF_3 , substituted or unsubstituted C_1 - C_6 alkyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, OCF_3 , OR'^3 , OSO_2 -aryl, substituted or unsubstituted amine, $NHCO_2R'^3$, $NHSO_2R'^3$, $CONHR'^3$, or $SO_2NHR'^3$; and

R'^3 is H, or substituted or unsubstituted C_1 - C_6 alkyl, substituted or unsubstituted aryl.

5. (Amended) A compound having the following formula (III):



(III)

(A) where X and Y are C and O respectively

R is H, OH, OCH_3 , OCF_3 , F, Cl, Br, I, C_1 - C_6 alkyl, aryl or $(CH_2)_n$ -aryl;

R_1 is OH, F, Br, I, C_1 - C_6 alkyl, C_3 - C_6 cycloalkyl, $CH=CH$ -aryl, $C\equiv C$ -aryl, $(CHR'^3)_n$ -aryl, NR'^3 - C_1 - C_6 alkyl, NR'^3 -cycloalkyl, NR'^3 -(CHR'^3) $_n$ -aryl, $(CHR'^3)_n$ - NR'^3 -aryl, $(CHR'^3)_n$ - NR'^3 -alkyl, $(CHR'^3)_n$ - NR'^3 -cycloalkyl, $(CHR'^3)_n$ -O-aryl, $(CHR'^3)_n$ -O-cycloalkyl, O-(CHR'^3) $_n$ -aryl, S-(CHR'^3) $_n$ -aryl, or CO-aryl, wherein n is 0, 1, or 2, $(CHR'^3)_m$ -O-alkyl wherein m is 1 or 2, and cycloalkyl or aryl is optionally substituted with F, Cl, Br, I, CN, CO_2H , $CO_2R'^3$, NO_2 , CF_3 , substituted or unsubstituted C_1 - C_6 alkyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, OCF_3 , OR'^3 , OSO_2 -aryl, substituted or unsubstituted amine, $NHCOR'^3$, $NHSO_2R'^3$, $CONHR'^3$, or $SO_2NHR'^3$ and alkyl is optionally substituted with F, Cl, Br, I, CN, NO_2 , CF_3 , substituted or unsubstituted C_1 - C_6 alkyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, OCF_3 , OSO_2 -aryl, substituted or unsubstituted amine, $NHCOR'^3$, $NHSO_2R'^3$, $CONHR'^3$, or $SO_2NHR'^3$;

R_2 and R_3 are independently H, OH, F, Cl, Br, I, C_1 - C_6 alkyl, C_3 - C_6 cycloalkyl, $CH=CH$ -aryl, $C\equiv C$ -aryl, $(CHR'^3)_n$ -aryl, NR'^3 - C_1 - C_6 alkyl, NR'^3 -cycloalkyl, NR'^3 -(CHR'^3) $_n$ -aryl, $(CHR'^3)_n$ - NR'^3 -aryl, $(CHR'^3)_n$ - NR'^3 -alkyl, $(CHR'^3)_n$ - NR'^3 -cycloalkyl, $(CHR'^3)_n$ -O-aryl, $(CHR'^3)_n$ -O-alkyl, $(CHR'^3)_n$ -O-cycloalkyl, O-(CHR'^3) $_n$ -aryl, S-(CHR'^3) $_n$ -aryl, or CO-aryl, wherein n is 0, 1, or 2 and alkyl, cycloalkyl or aryl is optionally substituted with F, Cl, Br, I, CN, CO_2H , $CO_2R'^3$, NO_2 , CF_3 , substituted or unsubstituted C_1 - C_6 alkyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, OCF_3 , OR'^3 , OSO_2 -aryl, substituted or unsubstituted amine, $NHCOR'^3$, $NHSO_2R'^3$, $CONHR'^3$, or $SO_2NHR'^3$; and

R'^3 is H, or substituted or unsubstituted C_1 - C_6 alkyl, substituted or unsubstituted aryl; or

(B) where X and Y are C and NH respectively,

R is H, OH, OCH_3 , OCF_3 , F, Cl, Br, I, C_1 - C_6 alkyl, aryl or $(CH_2)_n$ -aryl;

R_1 is OH, F, Cl, Br, I, C_1 - C_6 alkyl, C_3 - C_6 cycloalkyl, $CH=CH$ -aryl, $C\equiv C$ -aryl, $(CHR'^3)_n$ -aryl, NR'^3 - C_1 - C_6 alkyl, NR'^3 -cycloalkyl, NR'^3 -(CHR'^3) $_n$ -aryl, $(CHR'^3)_n$ - NR'^3 -aryl, $(CHR'^3)_n$ - NR'^3 -alkyl, $(CHR'^3)_n$ - NR'^3 -cycloalkyl, $(CHR'^3)_n$ -O-aryl, $(CHR'^3)_n$ -O-alkyl, $(CHR'^3)_n$ -O-cycloalkyl, O-(CHR'^3) $_n$ -aryl, S-(CHR'^3) $_n$ -aryl, or CO-aryl, wherein n is 0, 1, or 2 and alkyl, cycloalkyl or aryl is optionally substituted with F, Cl, Br, I, CN, CO_2H , $CO_2R'^3$, NO_2 , CF_3 , substituted or unsubstituted C_1 - C_6 alkyl, substituted or unsubstituted cycloalkyl, substituted or

unsubstituted aryl, OCF_3 , OR^3 , OSO_2 -aryl, substituted or unsubstituted amine, NHCOR^3 , NHSO_2R^3 , CONHR^3 , or SO_2NHR^3 ;

R_2 and R_3 are independently H, OH, F, Cl, Br, I, C_1 - C_6 alkyl, C_3 - C_6 cycloalkyl, $\text{CH}=\text{CH}$ -aryl, $\text{C}\equiv\text{C}$ -aryl, $(\text{CHR}^3)_n$ -aryl, NR^3 - C_1 - C_6 alkyl, NR^3 -cycloalkyl, NR^3 -(CHR^3) $_n$ -aryl, $(\text{CHR}^3)_n$ - NR^3 -aryl, $(\text{CHR}^3)_n$ - NR^3 -alkyl, $(\text{CHR}^3)_n$ - NR^3 -cycloalkyl, $(\text{CHR}^3)_n$ -O-aryl, $(\text{CHR}^3)_n$ -O-alkyl, $(\text{CHR}^3)_n$ -O-cycloalkyl, O-(CHR^3) $_n$ -aryl, S-(CHR^3) $_n$ -aryl, or CO-aryl, wherein n is 0, 1, or 2 and alkyl, cycloalkyl or aryl is optionally substituted with F, Cl, Br, I, CN, CO_2H , CO_2R^3 , NO_2 , CF_3 , substituted or unsubstituted C_1 - C_6 alkyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, OCF_3 , OR^3 , OSO_2 -aryl, substituted or unsubstituted amine, NHCOR^3 , NHSO_2R^3 , CONHR^3 , or SO_2NHR^3 ; and

R^3 is H, or substituted or unsubstituted C_1 - C_6 alkyl, substituted or unsubstituted aryl or

(C) where X and Y are both N

R is H, OH, OCH_3 , OCF_3 , F, Cl, Br, I, C_1 - C_6 alkyl, aryl or $(\text{CH}_2)_n$ -aryl;

R_1 is OH, F, Cl, Br, I, C_1 - C_6 alkyl, C_3 - C_6 cycloalkyl, $\text{CH}=\text{CH}$ -aryl, $\text{C}\equiv\text{C}$ -aryl, $(\text{CHR}^3)_n$ -aryl, NR^3 - C_1 - C_6 alkyl, NR^3 -cycloalkyl, NR^3 -(CHR^3) $_n$ -aryl, $(\text{CHR}^3)_n$ - NR^3 -aryl, $(\text{CHR}^3)_n$ - NR^3 -alkyl, $(\text{CHR}^3)_n$ - NR^3 -cycloalkyl, $(\text{CHR}^3)_n$ -O-aryl, $(\text{CHR}^3)_n$ -O-alkyl, $(\text{CHR}^3)_n$ -O-cycloalkyl, O-(CHR^3) $_n$ -aryl, S-(CHR^3) $_n$ -aryl, or CO-aryl, wherein n is 0, 1, or 2 and alkyl, cycloalkyl or aryl is optionally substituted with F, Cl, Br, I, CN, CO_2H , CO_2R^3 , NO_2 , CF_3 , substituted or unsubstituted C_1 - C_6 alkyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, OCF_3 , OR^3 , OSO_2 -aryl, substituted or unsubstituted amine, NHCOR^3 , NHSO_2R^3 , CONHR^3 , or SO_2NHR^3 ;

R_2 and R_3 are independently H, OH, F, Cl, Br, I, C_1 - C_6 alkyl, C_3 - C_6 cycloalkyl, $\text{CH}=\text{CH}$ -aryl, $\text{C}\equiv\text{C}$ -aryl, $(\text{CHR}^3)_n$ -aryl, NR^3 - C_1 - C_6 alkyl, NR^3 -cycloalkyl, NR^3 -(CHR^3) $_n$ -aryl, $(\text{CHR}^3)_n$ - NR^3 -aryl, $(\text{CHR}^3)_n$ - NR^3 -alkyl, $(\text{CHR}^3)_n$ - NR^3 -cycloalkyl, $(\text{CHR}^3)_n$ -O-aryl, $(\text{CHR}^3)_n$ -O-alkyl, $(\text{CHR}^3)_n$ -O-cycloalkyl, O-(CHR^3) $_n$ -aryl, S-(CHR^3) $_n$ -aryl, or CO-aryl, wherein n is 0, 1, or 2 and alkyl, cycloalkyl or aryl is optionally substituted with F, Cl, Br, I, CN, CO_2H , CO_2R^3 , NO_2 , CF_3 , substituted or unsubstituted C_1 - C_6 alkyl, substituted or unsubstituted

cycloalkyl, substituted or unsubstituted aryl, OCF_3 , $\text{OR}^{3'}$, OSO_2 -aryl, substituted or unsubstituted amine, $\text{NHCOR}^{3'}$, $\text{NHSO}_2\text{R}^{3'}$, $\text{CONHR}^{3'}$, or $\text{SO}_2\text{NHR}^{3'}$; and

$\text{R}^{3'}$ is H, or substituted or unsubstituted C_1 - C_6 alkyl, substituted or unsubstituted aryl.

6. The method of claim 2, comprising administering the 2-morpholino-substituted derivative of formula (I) wherein:

R is H, C_1 - C_6 branched or straight chain alkyl or aryl;

R_1 is H, OH, OCH_3 , OCF_3 , F, Cl, CF_3 , C_1 - C_6 branched or straight chain alkyl;

R_2 is C_1 - C_6 branched or straight chain alkyl, or aryl in either the R or the S configuration

R_3 is one or more of H, F, Cl, Br, CN, CO_2H , CO_2R , NO_2 , CF_3 , branched or straight chain C_1 - C_6 alkyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, OCH_3 , OCH_2F , OCHF_2 , OCF_3 , OR, substituted or unsubstituted amine, NHCOR , NHSO_2R , CONHR , or SO_2NHR

X is C or N and Y is N or O.

7. The method of claim 2, wherein the inhibitor administered is selected from the group consisting of:

(\pm)-7-methyl-9-{{[methyl(phenyl)amino]methyl}-2-morpholin-4-yl-pyrido[1,2-a]pyrimidin-4-one (TGX-195);

(\pm)-7-methyl-2-morpholin-4-yl-9-(1-phenylaminoethyl)-pyrido[1,2-a]pyrimidin-4-one (TGX-221);

(\pm)-7-methyl-2-morpholin-4-yl-9-[1-(4-fluorophenylamino)ethyl]-pyrido[1,2-a]pyrimidin-4-one (TGX-224);

(\pm)-9-[1-(3,4-difluorophenylamino)ethyl]-7-methyl-2-morpholin-4-yl-pyrido[1,2-a]pyrimidin-4-one (TGX-237);

(±)-9-[1-(2,5-difluorophenylamino)ethyl]-7-methyl-2-morpholin-4-yl-pyrido[1,2-a]pyrimidin-4-one (TGX-238);

(±)-9-[1-(3,5-difluorophenylamino)ethyl]-7-methyl-2-morpholin-4-yl-pyrido[1,2-a]pyrimidin-4-one (TGX-239);

(±)-9-[1-(4-fluoro-2-methylphenylamino)ethyl]-7-methyl-2-morpholin-4-yl-pyrido[1,2-a]pyrimidin-4-one (TGX-240);

(±)-9-[1-(4-chlorophenylamino)ethyl]-7-methyl-2-morpholin-4-yl-pyrido[1,2-a]pyrimidin-4-one (TGX-243);

(±)-9-[1-(3,4-dichlorophenylamino)ethyl]-7-methyl-2-morpholin-4-yl-pyrido[1,2-a]pyrimidin-4-one (TGX-244);

(±)-9-[1-(3-fluorophenylamino)ethyl]-7-methyl-2-morpholin-4-yl-pyrido[1,2-a]pyrimidin-4-one (TGX-247);

(±)-9-[1-(3-chlorophenylamino)ethyl]-7-methyl-2-morpholin-4-yl-pyrido[1,2-a]pyrimidin-4-one (TGX-248);

(±)-7-methyl-2-morpholin-4-yl-9-[1-(2-thiazolylamino)ethyl]-pyrido[1,2-a]pyrimidin-4-one (TGX-261);

(±)-7-methyl-9-[1-(3-methylphenylamino)ethyl]-2-morpholin-4-yl-pyrido[1,2-a]pyrimidin-4-one (TGX-262);

(±)-7-methyl-2-morpholin-4-yl-9-[1-(3-trifluoromethylphenylamino)ethyl]-pyrido[1,2-a]pyrimidin-4-one (TGX-264); and

(±)-7-methyl-2-morpholin-4-yl-9-[1-(2-pyridinylamino)ethyl]-pyrido[1,2-a]pyrimidin-4-one (TGX-295).

(±)-2-({1-[7-methyl-2-(morpholin-4-yl)-4-oxo-pyrido[1,2-a]pyrimidin-9-yl]ethyl}amino)benzoic acid (KN-309);

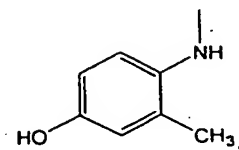
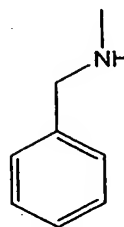
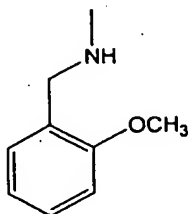
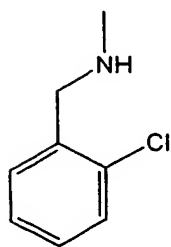
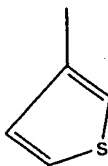
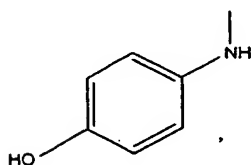
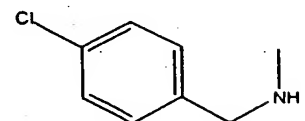
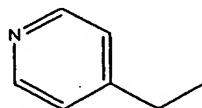
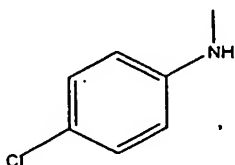
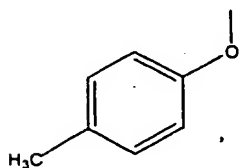
(±) methyl 2-({1-[7-methyl-2-(morpholin-4-yl)-4-oxo-pyrido[1,2-a]pyrimidin-9-yl]ethyl}amino)benzoate (KN-321);

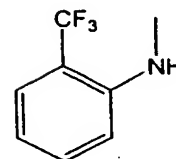
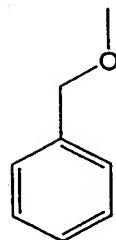
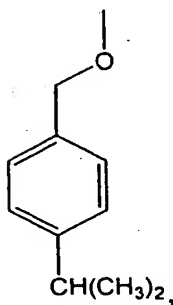
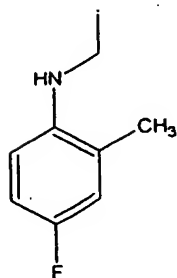
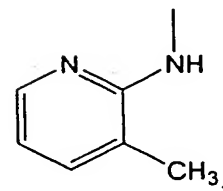
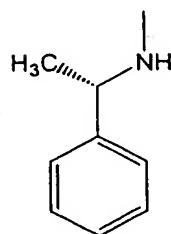
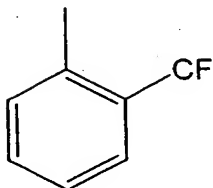
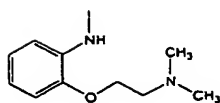
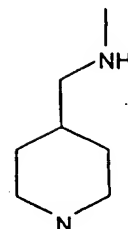
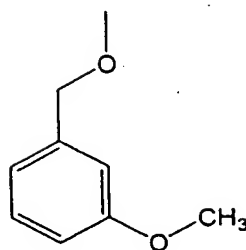
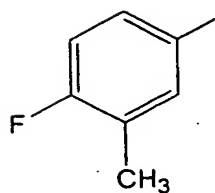
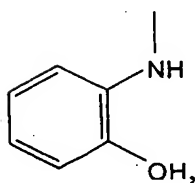
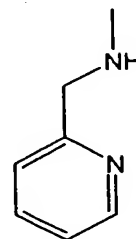
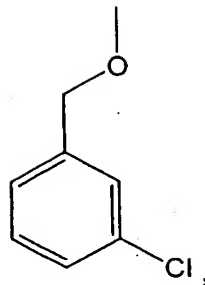
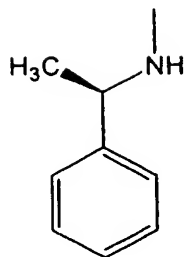
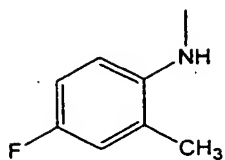
(±)-2-({1-[7-methyl-2-(morpholin-4-yl)-4-oxo-pyrido[1,2-a]pyrimidin-9-yl]ethyl}amino)benzonitrile (KN-320);

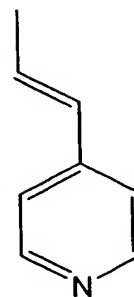
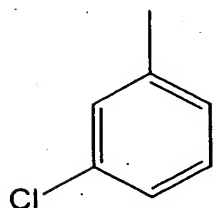
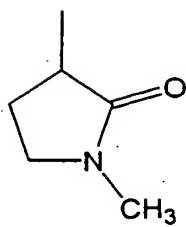
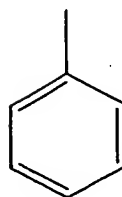
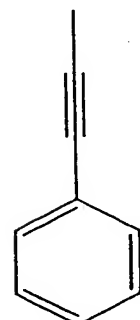
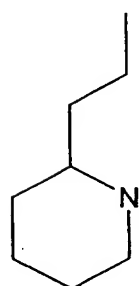
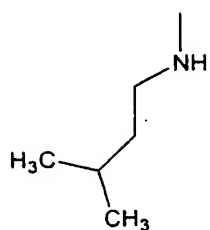
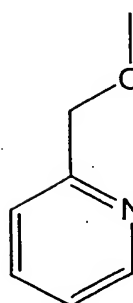
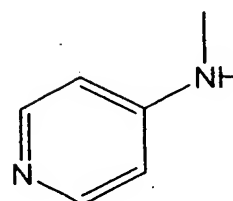
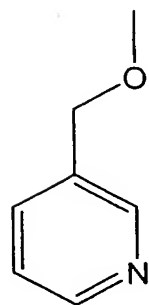
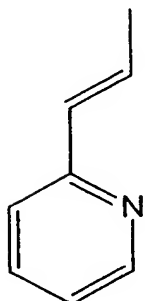
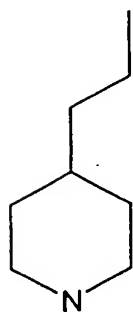
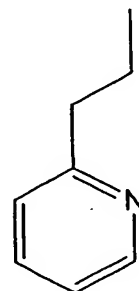
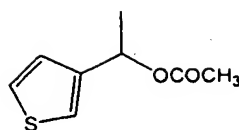
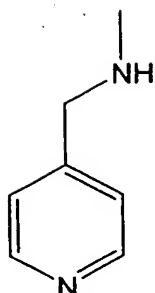
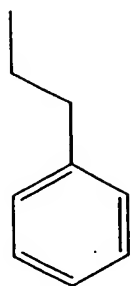
(±)-7-methyl-2-(morpholin-4-yl)-9-(1-{[2-(2*H*-tetrazol-5-yl)phenyl]amino}ethyl)-pyrido[1,2-a]pyrimidin-4-one (KN-325);

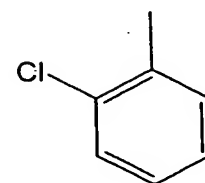
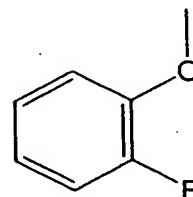
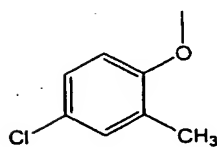
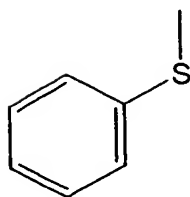
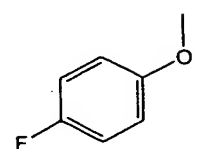
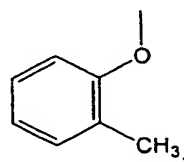
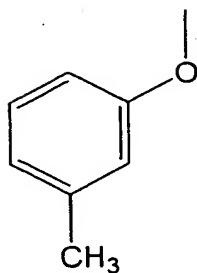
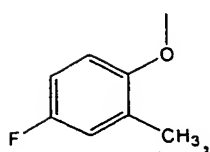
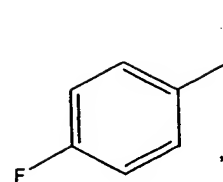
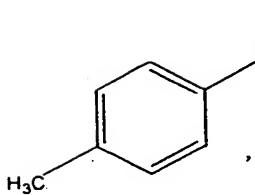
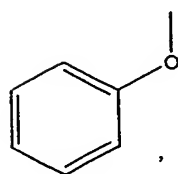
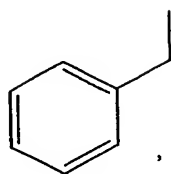
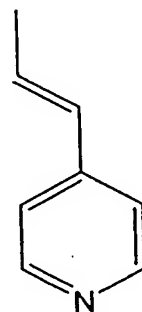
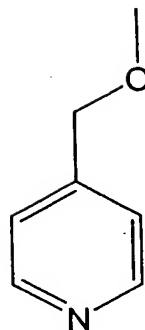
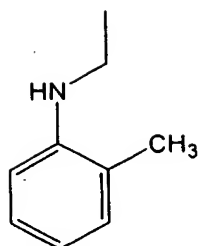
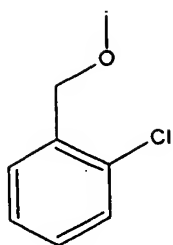
(±)-2-(4-morpholinyl)-8[1-(phenylamino)ethyl]-4*H*-1-benzopyran-4-one (TGX-280).

8. The compound of claim 5, wherein R¹ is selected from a group consisting of, CH₃, C₂H₅,

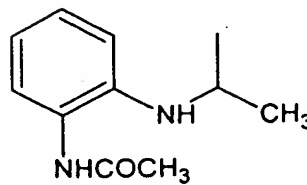
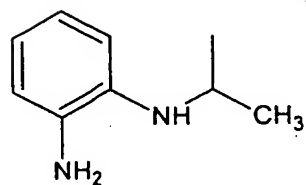
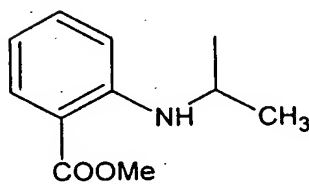
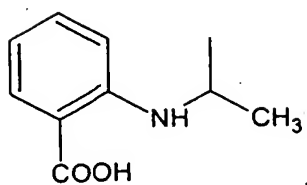
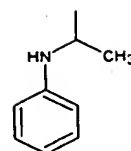
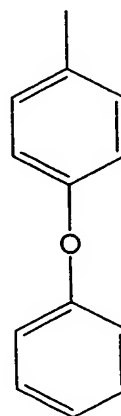
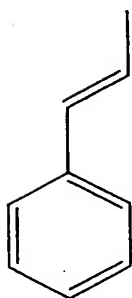
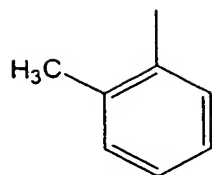
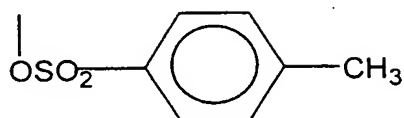
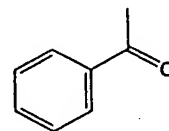
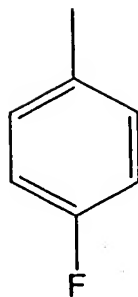
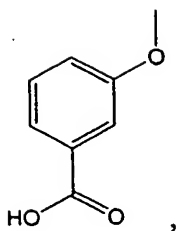
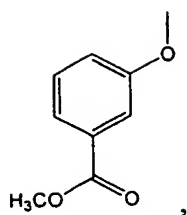


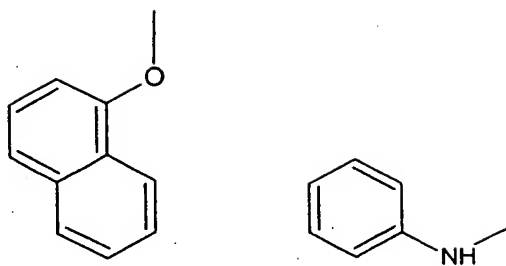




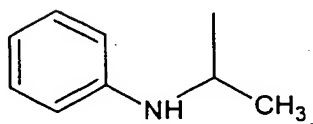


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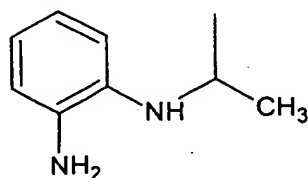




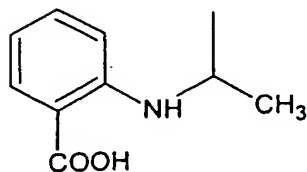
9. The compound of claim 5, wherein R is methyl and R¹ is



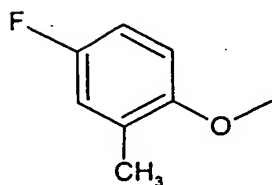
10. The compound of claim 5, wherein R is methyl and R¹ is



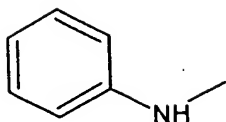
11. The compound of claim 5, wherein R is methyl and R¹ is



12. The compound of claim 5, wherein R is H and R¹ is



13. The compound of claim 5, wherein R is H and R¹ is



14. A method for inhibiting phosphoinositide 3-kinase in a patient, comprising administering to a patient an amount of the compound of claim 5 effective in inhibiting the phosphoinositide 3-kinase in the patient.

15. A method for preventing or treating cardiovascular disease comprising administering an effective amount of the compound of claim 5 to a patient in need thereof.

16. A method for preventing or treating respiratory disease comprising administering an effective amount of the compound of claim 5 to a patient in need thereof.

17. A method for preventing or treating cancer comprising administering an effective amount of the compound of claim 5 to a patient in need thereof.

18. A method for preventing or treating disease linked to disordered white blood cell function comprising administering an effective amount of the compound of claim 5 to a patient in need thereof.

19. (Deleted).

19. (Renumbered) The method of claim 4, wherein the inhibitor administered is 6-methyl-8-[1-(phenylamino)ethyl]-2-(4-pyridinyl)-4*H*-benzopyran-4-one.

20. (Renumbered) The method of claim 4, wherein the inhibitor administered is 6-methyl-8-{1-[(2-aminophenyl)amino]ethyl}-2-(4-pyridinyl)-4*H*-benzopyran-4-one.

21. (Renumbered) A compound which is (±)-7-methyl-2-morpholin-4-yl-9-(1-phenylaminoethyl)-pyrido[1,2-*a*]pyrimidin-4-one.

22. (Renumbered) A compound which is (±)-2-({1-[7-methyl-2-(morpholin-4-yl)-4-oxo-pyrido[1,2-*a*]pyrimidin-9-yl]ethyl} amino)benzoic acid.

23. (Renumbered) A compound which is (\pm) -2-({1-[7-methyl-2-(morpholin-4-yl)-4-oxo-pyrido[1,2-a]pyrimidin-9-yl]ethyl}amino)benzonitrile.
24. (Renumbered) A compound which is (\pm) methyl 2-({1-[7-methyl-2-(morpholin-4-yl)-4-oxo-pyrido[1,2-a]pyrimidin-9-yl]ethyl}amino)benzoate.
25. (Renumbered) A compound which is (\pm) -7-methyl-2-(morpholin-4-yl)-9-(1-{[2-(2*H*-tetrazol-5-yl)phenyl]amino}ethyl)-pyrido[1,2-a]pyrimidin-4-one.